

**HIGH PRECISION FEED PARTICULARLY USEFUL FOR
UV INK JET PRINTING ON VINYL**

Abstract of the Disclosure:

An apparatus (30, 40, 50) and a method of ink jet printing are disclosed that use a system for feeding a substrate longitudinally relative to a support area and a system for moving a printhead parallel to the direction of substrate feed. Indexing between transverse scan rows of a printhead (20) is carried out initially by the substrate feed system (16) and the actual feed distance is measured using an encoder or other substrate position measurement device (26). A controller (25) determines the amount of any error that occurs between the actual and the desired feed distances. The controller (25) then sends signals to move the printhead (20) to compensate for any error in the feed system feed. Compensating adjustments are then made to the next subsequent substrate indexing step so that the printhead tends to move back toward its home or zeroed position with its next correction and does not walk away from this home position as a result of cumulative movements. For printers that have bridges (17) moveable relative to the machine frame (11) on which the printhead (20) is carried, printhead motion is achieved by moving the bridge, for example, by actuating a linear servo bridge motion system (31). For fixed bridge roll-to-roll printers, the printhead (20) can be caused to shift longitudinally on the bridge (17) to make the correcting movements.